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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/963,578	09/27/2001	Masanori Watanuki	04329.2682	9687

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EXAMINER

FAULK, DEVONA E

ART UNIT	PAPER NUMBER
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2615

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/03/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/963,578

Applicant(s)

WATANUKI, MASANORI

Examiner

Devona E. Faulk

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13, 16, 21, 24 and 29-38 is/are pending in the application.
- 4a) Of the above claim(s) 30, 32, 35 and 38 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13, 16, 21, 24, 29, 31, 32, 33, 34, 36, 37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

The RCE filed on 12/7/2006 was received and the amendment entered.

Response to Arguments

1. Applicant's arguments filed 12/7/2006, with respect to the newly recited language " ...a data extracting section configured to extract a respective one of the left and right digital music data received by the receiver" of claim 13 are not persuasive. The applicant asserts that prior art Dress fails to read on " a respective one of...". The examiner disagrees and asserts that Dress discloses in Figure 5 a block diagram of one of the earphones (there is a duplicate for the other) wherein each earphone comprises an audio amplifier (212, Figure 5; reads on a data extracting section configured to extract a respective one of the left and right digital music data receiver by said receiver.
2. Applicant's arguments regarding the amended language to claims 13 and 21 are not persuasive. The applicant has amended claims 13, and 21 to recite a digital modulator configured to transmit left and right digital music data to the left and right headphones via the wireless digital data transmission channel. The applicant asserts that prior art Dress fails to disclose a digital modulator. The examiner asserts that Dress discloses a modulator, Figure 2), that the audio source may be a CD player (column 6, lines 25-28) and discloses that wireless communication is used (column 6, lines 25-28; column 1, lines 14-16; column 2, lines 64-67). The examiner further asserts that Dress clearly teaches of digital transmission. Dress discloses transmitting using digital data (column 9, lines 20-45; column 10, lines 62-67; transmitting can include spread spectrum modulation and code division multiple access; column 10, lines 62-65).

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The examiner asserts that it would have been obvious to one of ordinary skill in the art to have the modulator be a digital modulator when using digital transmission in order to provide high fidelity transmission.

3. The applicant has added claims 29-38 and cancelled claims 1-12, 14-15, 17-20, 22-23 and 25-28.

4. The examiner has determined that claims 30, 32, 35, and 38 are drawn to a non-elected species, Figure 5 (see page 16, lines 3-8 and page 15, lines 13-19). Figure 6 does not teach that the left and right side digitally modulated data is time-division multiplexed, that the left-side receiver is configured to receive both the left-side and right side digitally modulated data, but extract only the left-side digitally modulated data and that the right-side receiver is configured to receive both the left-side and right-side digitally modulated data but extracts only the right-side digitally modulated data. This is disclosed in the description for Figure 5. The description of Figure 6 discloses that the modulated devices transmit signals by using a frequency division system and that the left-side receiver receives exclusively the left-side digitally modulated data and the right-side receiver receives exclusively the right-side digitally modulated data.

Election/Restrictions

5. Claims 30, 32, 35 and 38 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species 2, Figure 5 (see page 16, lines 3-8 and page 15, lines 13-19). Figure 6 does not teach that the left and right side digitally modulated data is time-division multiplexed. The description of Figure 6

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discloses that the modulated devices transmit signals by using a frequency division system. Figure 5 discloses using a time division system.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. **Claims 29,31 and 37** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 29,31 and 37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 29 and 31 recite "wherein said digital modulator is a spread spectrum transmitter configured to hop among a plurality of frequencies" and claim 37 recites "wherein the left-side and right-side digitally modulated data are received in a spread spectrum transmission that hops among a plurality of frequencies". With regards to spread spectrum transmission, the specification only discloses that "The audio player 10 reproduces music stored in the memory card, and transmits the reproduced digital music data to the headphone 20 via wireless communication. Bluetooth, for example, is used for wireless communication. Bluetooth is a specification for short distance wireless communication in which wireless communication within 10 m is generally carried out by

using an ISM (Industry Science Medical) band of 2.4 GHz bandwidth. Bluetooth uses a frequency hopping system as a spread spectrum technique, and a maximum of eight devices can be connected by time division multiple system" (page 8, lines 19-page 9, line 2). The specification does not disclose that the digital modulator is a spread spectrum transmitter or that the left-side and right-side digitally modulated data are received in a spread spectrum transmission.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. **Claims 13,16,29,33 and 37** are rejected under 35 U.S.C. 102(e) as being unpatentable over Dress et al. (US 6,519,448).

Regarding **claim 13**, Dress discloses a music reproduction apparatus (Figure 1; column 2, lines 58-62) comprising an audio player (audio source, Figure 2; Dress teaches that the audio source may be a CD player; column 6, lines 25-28) and

a pair of left and right headphones (200, Figure 1) connected to said audio player via a wireless digital data transmission channel (column 2, lines 57-67; column 9, lines 20-40), wherein:

said audio player comprises:

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a modulator (180, part of transmitter 160; Figures 2 and 3) configured to transmit left and right digital music data to the left and right headphones via the wireless transmission channel (column 9, lines 20-40; Dress teaches that the audio source may be a CD player; column 6, lines 25-28; column 1, lines 14-16; column 2, lines 64-67 discloses wireless communication is used), and

said left and right headphones each comprise:

a receiver configured to receive the left and right digital music data transmitted from said audio player (220, Figure 5; column 8, lines 44-45; column 9, lines 20-40) and

a data extracting section configured to extract a respective one of the left and right digital music data received by said receiver(212, audio amplifier; column 9, lines 20-40; Dress discloses in Figure 5 a block diagram of one the earphones (there is a duplicate for the other) wherein each earphone comprises an audio amplifier (212, Figure 5; reads on a data extracting section configured to extract a respective one of the left and right digital music data received by said receiver.).

Dress discloses that the audio source may be a CD player (column 6, lines 25-28) and furthermore transmitting using digital data (column 9, lines 20-45; column 10, lines 62-67). Dress discloses that transmitting can include spread spectrum modulation code division multiple access column 10, lines 62-65), both of which are used with digital transmission.

Dress fails to disclose explicitly that the modulator is digital. The examiner takes official notice that digital modulators are known in art.

It would have been obvious to one of ordinary skill in the art to have the modulator be a digital modulator when using digital transmission in order to provide high fidelity transmission.

Regarding **claim 16**, Dress discloses wherein said audio player comprises an interface capable of wirelessly connecting a plurality of headphones (Figure 2; column 2, line 65-column 3, line 3; each of the earphones read on a separate headphone).

Regarding **claim 29**, Dress discloses that the transmitting includes spread spectrum modulation (column 10, lines 62-63).

Regarding **claim 33**, Dress discloses a pair headphones comprising:

a left side receiver (Figure 5, receiver 220; column 9, lines 20-40; Dress discloses in Figure 5 a block diagram of one the earphones (there is a duplicate for the other earphone) wherein each earphone comprises a receiver, 220.);

a right side receiver Figure 5, receiver 220; column 9, lines 20-40; Dress discloses in Figure 5 a block diagram of one the earphones (there is a duplicate for the other earphone) wherein each earphone comprises a receiver, 220.); wherein:

said left-side receiver is configured to receive left-side modulated data transmitted from an audio player via a wireless digital data transmission channel (Figure 5, column 8, lines 44-55) ; and

said right-side receiver is configured to receive right-side digitally data transmitted from the audio player via the wireless digital data transmission channel (Figure 5, column 8, lines 44-55).

Dress discloses that the audio source may be a CD player (column 6, lines 25-28) and furthermore transmitting using digital data (column 9, lines 20-45; column 10, lines 62-67). Dress discloses that transmitting can include spread spectrum modulation code division multiple access column 10, lines 62-65), both of which are used with digital transmission.

Dress fails to disclose explicitly that the modulator is digital. The examiner takes official notice that digital modulators are known in art. It would have been obvious to one of ordinary skill in the art to have the modulator be a digital modulator when using digital transmission in order to provide high fidelity transmission.

Regarding **claim 37**, Dress discloses that the transmitting includes spread spectrum modulation (Dress, column 10, lines 62-63).

10. **Claims 21,24, 31,34 and 36** are rejected under 35 U.S.C. 103(a) as being unpatentable over Dress et al. (US 6,519,448) as applied to claim 33 above in view of Schwab (US 4,845,751).

Regarding **claim 21**, Dress discloses a music reproduction apparatus (Figure 1; column 2, lines 58-62) comprises an audio player (audio source, Figure 2) and a pair of left and right headphones (200, Figure 2) connected to said audio player via wireless digital data transmission channel (Figure 2; column 2, lines 57-67; column 9, lines 20-40),

said audio player comprising a modulator (180, Figure 2; column 2, lines 57-67; column 8, lines 44-45) configured to transmit, via the wireless digital data transmission

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channel (column 9, lines 20-40; Dress teaches that the audio source may be a CD player; column 6, lines 25-28; column 1, lines 14-16; column 2, lines 64-67 discloses wireless communication is used) left digital music data to the left headphone and transmit right digital music data to the right headphone.

Dress fails to disclose transmitting left music data to the left headphone exclusive of the right music data and transmitting the right music data to the right headphone exclusive of the left music data. Schwab discloses a wireless stereo headphone including a left receiver and a right receiver wherein the left music data is received exclusively of the right music data and that the right music data is received exclusive of the left music data (Figure 3; implicit). It would have been obvious to modify Dress to have transmit the left music data exclusive of the right music data and to transmit the right music data exclusive of the left music data in order to provide an enhanced listening experience for the user.

Regarding **claim 24**, Dress as modified by Schwab discloses wherein said audio player comprises an interface capable of wirelessly connecting a plurality of headphones (Dress, Figure 2; column 2, line 65-column 3, line 3; each of the earphones read on a separate headphone).

Regarding **claim 31**, Dress as modified by Schwab discloses that the transmitting includes spread spectrum modulation (Dress, column 10, lines 62-63).

Regarding **claim 34**, Dress discloses wherein said left-side receiver is configured to receive the left-side digitally modulated data; and said right side receiver is configured to receive the right-side digitally modulated data (Figure 5). Dress fails to disclose that the left-side digitally modulated data is received exclusive of the right-side digitally modulated data and that the right-side digitally modulated data is received exclusive of the left-side digitally modulated data. Schwab discloses a wireless stereo headphone including a left receiver and a right receiver wherein the left-side data is received exclusively of the right-side data and that the right-side data is received exclusive of the left-side data (Figure 3; implicit). It would have been obvious to modify Dress to have the left-side receiver receive exclusively the left signal and the right-side receiver receive exclusively the right signal in order to provide an enhanced listening experience for the user.

Regarding **claim 36**, Dress discloses wherein said left-side receiver is configured to receive the left-side digitally modulated data; and said right side receiver is configured to receive the right-side digitally modulated data (Figure 5). Dress fails to disclose that the left-side receiver and right-side receiver receive the respective left-side and right-side data. Schwab discloses a wireless stereo headphone including a left receiver and a right receiver (Figure 3; implicit) that receives the respective the left and right signal. It would have been obvious to modify Dress to have the left-side receiver and the right-side receiver receive the respective left and right signal in order to provide an enhanced listening experience for the user.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Devona E. Faulk whose telephone number is 571-272-7515. The examiner can normally be reached on 8 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 571-272-7848.

The Art Unit location of your application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 2615. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


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